

What is claimed is:

1. A tire/wheel assembly comprising:

a wheel having a rim;

a pneumatic tire mounted on the rim of the wheel, the pneumatic tire having a cavity; and

a run-flat support member disposed in the cavity of the pneumatic tire, the run-flat support member having an annular shell and elastic rings, the annular shell comprising a support surface located radially outward and two leg portions formed radially inward in a straddling state, the elastic rings supporting the leg portions on the rim,

wherein the annular shell is configured such that an annular cavity portion surrounded by the run-flat support member and the pneumatic tire has a cross-sectional area that varies in a circumferential direction of the tire.

2. A tire/wheel assembly according to claim 1, wherein the cross-sectional area of the annular cavity portion varies in such a manner that a maximum cross-sectional area thereof is 2% greater or more than a minimum cross-sectional area thereof.

3. A tire/wheel assembly according to claim 1 or 2, wherein the cross-sectional area of the annular cavity portion varies periodically.

4. A tire/wheel assembly according to claim 1, 2 or 3, wherein the leg portions of the annular shell have a cross-sectional shape which varies in the tire circumferential direction.

5. A tire/wheel assembly according to claim 1, 2, 3 or 4, wherein the annular shell has support surfaces connected via a connection section, the connection section having a cross-sectional shape which varies in the tire circumferential direction.

6. A tire/wheel assembly according to claim 1, 2, 3, 4 or 5, wherein the annular shell is formed by jointing a plurality of shell pieces into which the annular shell is divided in a circumferential direction of the shell.

7. A tire/wheel assembly comprising:

a wheel having a rim;

a pneumatic tire mounted on the rim of the wheel, the pneumatic tire having a cavity; and

a run-flat support member disposed in the cavity of the pneumatic tire in such a manner that the run-flat support member divides the cavity of the pneumatic tire into an inner cavity part and an outer cavity part, the run-flat support member having an annular shell and elastic rings, the annular shell comprising a support surface located radially outward and two leg portions formed radially inward in a straddling state, the elastic rings supporting the leg portions on the rim,

wherein the annular shell has a plurality of openings through which the inner cavity part and outer cavity part are communicatingly connected, the annular shell having regions equally sectioned in a circumferential direction of the annular

shell, the plurality of openings being unevenly distributed in such a manner that a region having openings that are maximum in total opening area is 5% to 10% greater in total opening area than a region having openings that are minimum in total opening area.

8. A tire/wheel assembly according to claim 7, wherein the equally sectioned regions consists of two to seven regions into which the annular shell is equally sectioned in the circumferential direction thereof.

9. A tire/wheel assembly according to claim 8, wherein the equally sectioned regions consists of four regions into which the annular shell is equally sectioned in the circumferential direction thereof, the four equally sectioned regions consisting of regions having openings that are maximum in total opening area and regions having openings that are minimum in total opening area, which are alternately placed.

10. A tire/wheel assembly according to claim 7, 8 or 9, wherein the openings have opening lengths of 3 mm to 6 mm.

11. A tire/wheel assembly according to claim 7, 8, 9 or 10, wherein the annular shell has an outer surface, an entire opening area of all the openings on the outer surface of the annular shell being 0.3% to 6.0% with respect to an area of the outer surface of the annular shell.

12. A run-flat support member which is to be disposed in a cavity of a pneumatic tire mounted on a rim of a wheel, comprising:

an annular shell having a support surface located radially outward and two leg portions formed radially inward in a straddling state; and

elastic rings supporting the leg portions on the rim, wherein the annular shell is configured such that, when the run-flat support member is disposed in the tire cavity, an annular cavity portion surrounded by the run-flat support member and the pneumatic tire has a cross-sectional area that varies in a circumferential direction of the tire.

13. A run-flat support member according to claim 12, wherein the cross-sectional area of the annular cavity portion varies in such a manner that a maximum cross-sectional area thereof is 2% greater or more than a minimum cross-sectional area thereof.

14. A run-flat support member according to claim 12 or 13, wherein the cross-sectional area of the annular cavity portion varies periodically.

15. A run-flat support member according to claim 12, 13 or 14, wherein the leg portions of the annular shell have a cross-sectional shape which varies in a circumferential direction of the shell.

16. A run-flat support member according to claim 12, 13, 14 or 15, wherein the annular shell has support surfaces connected via a connection section, the connection section having a cross-sectional shape which varies in a circumferential

direction of the shell.

17. A run-flat support member according to claim 12, 13, 14, 15 or 16, wherein the annular shell is formed by jointing a plurality of shell pieces into which the annular shell is divided in a circumferential direction of the shell.

18. A run-flat support member comprising:

an annular shell having a support surface located radially outward and two leg portions formed radially inward in a straddling state; and

elastic rings supporting the leg portions on a rim of a wheel,

wherein the annular shell has a plurality of openings, the annular shell having regions equally sectioned in a circumferential direction of the annular shell, the plurality of openings being unevenly distributed in such a manner that a region having openings that are maximum in total opening area is 5% to 10% greater in total opening area than a region having openings that are minimum in total opening area.

19. A run-flat support member according to claim 18, wherein the equally sectioned regions consists of two to seven regions into which the annular shell is equally sectioned in the circumferential direction thereof.

20. A run-flat support member according to claim 19, wherein the equally sectioned regions consists of four regions into which the annular shell is equally sectioned in the

circumferential direction thereof, the four equally sectioned regions consisting of regions having openings that are maximum in total opening area and regions having openings that are minimum in total opening area, which are alternately placed.

21. A run-flat support member according to claim 18, 19 or 20, wherein the openings have opening lengths of 3 mm to 6 mm.

22. A run-flat support member according to claim 18, 19, 20 or 21, wherein the annular shell has an outer surface, an entire opening area of all the openings on the outer surface of the annular shell being 0.3% to 6.0% with respect to an area of the outer surface of the annular shell.